Intellectual Property Management

NASA Advisory Council
Technology and Innovation Committee
Ames Research Center
August 2, 2011

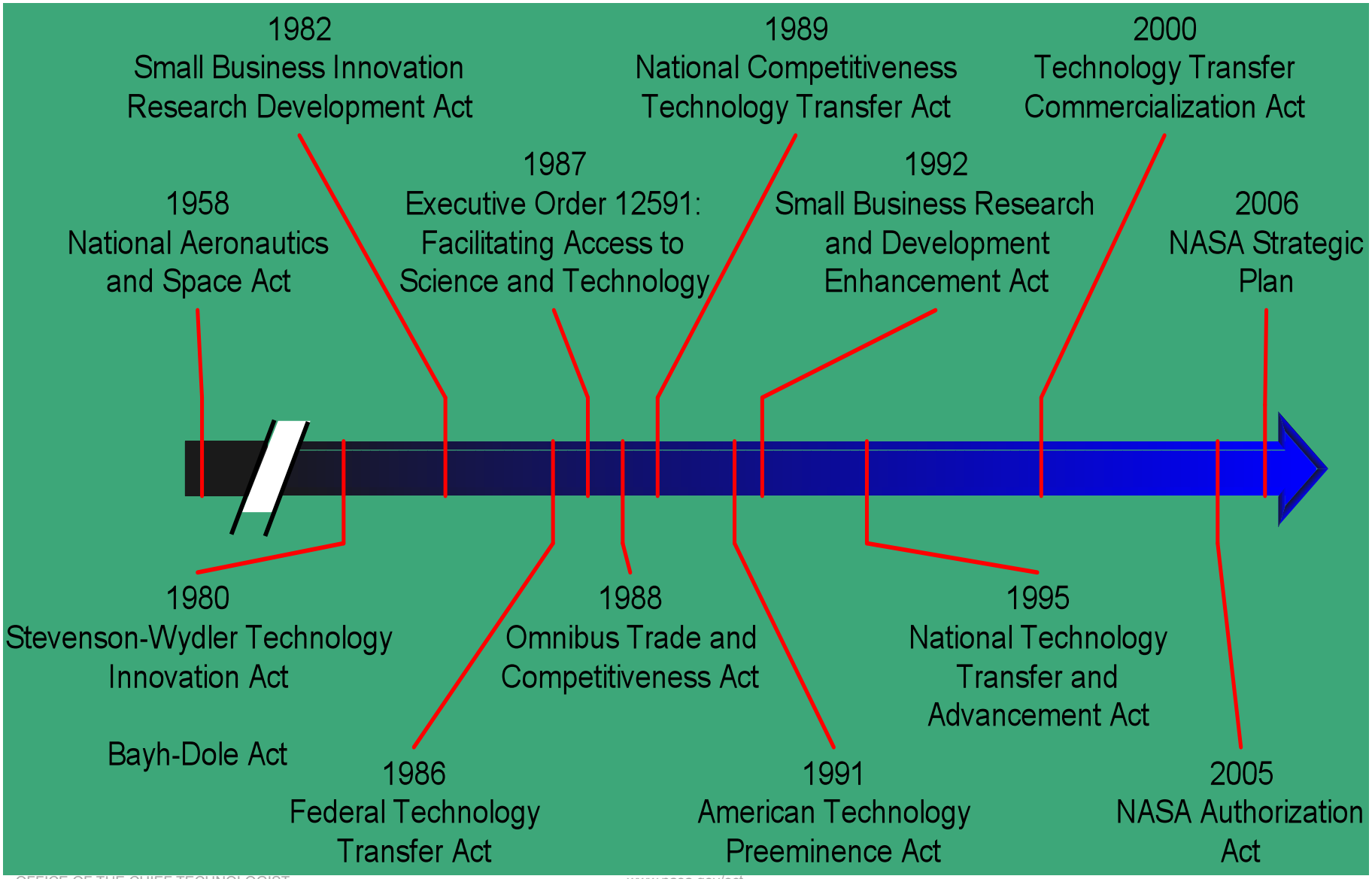
Courtney Graham
Associate General Counsel
Office of the General Counsel
NASA Headquarters

Doug Comstock
Director, Innovative Partnerships Office
Office of the Chief Technologist
NASA Headquarters

Agenda

- Federal Guidance
- NASA Intellectual Property Policy
- Key Intellectual Property Metrics since FY 2000
- Ongoing and Planned IP Management Activities

Policy Guidance and Statutory Authority



National Aeronautics and Space Act

- Section 102 (42 U.S.C. 2451) requires NASA to conduct its activities to contribute to U.S. preservation as leader in aeronautical and space S&T; Original mandate for NASA to transfer valuable technology for benefit of US Industry.
- Section 305 (42 U.S.C. 2457) authorizes NASA to protect inventions to which it has title, provided original NASA licensing authority (deleted upon passage of Bayh-Dole).
  - Applies to large business contracts, grants, & cooperative agreements; Large businesses must reports inventions.
  - Government owns inventions developed under these contracts.
  - Administrator may waive NASA's rights.
    - Large businesses must commercialize.
    - NASA obtains license on behalf of Government.
- Section 203 (42 U.S.C. 2473) requires NASA to provide widest practicable and appropriate dissemination of information concerning its activities and their results.
- NASA must monitor and enforce compliance with Space Act to protect the Government's interests and protect the public's investment.

Government-Wide Legislation – Since 1980

- Demonstrated commitment to technology transfer.
  - Fostering public availability of federally funded technology.
  - Transfer of technology from Federal laboratories to the private sector.
- Stevenson-Wydler and FTTA: Continuing series of laws to define and promote technology transfer (15 U.S.C. Ch 63).
  - Encouraged development of commercial technologies through collaboration among Federal labs, academia, and industry.
    - Technology transfer mechanisms and incentives.
    - Joint research & development projects.
    - Personnel exchange.
  - Transfer of federally owned or originated technology is a national policy and a mission of each federal laboratory.
  - Federal agencies that operate/direct federal laboratories must have a formal Technology Transfer program.
  - Federal laboratories must fund technology transfer activities.
  - Established the Federal Laboratory Consortium for Technology Transfer.

Bayh-Dole Act

- Bayh-Dole Act (35 U.S.C. Ch 18) established that agencies should:
  - Encourage maximum participation of industry in federally supported R&D;
  - Use patent system to promote transfer and public availability of federally funded inventions; and
  - Ensure Government obtains sufficient rights.
- Small entities may retain title to inventions developed under federal funding agreements.
  - Small businesses, universities and non-profit organizations.
  - Contracts, grants, cooperative agreements & subcontracts.
- Government-wide authority to license government owned inventions.
- Applies to small entity contracts, grants and cooperative agreements.
- Agencies must establish Government's rights in inventions.
  - If small entity elects to retain title:
    - Must commercialize invention;
    - Government obtains license.
  - If title not retained, Government may obtain title.

NASA Policy Directives and Procedural Requirements

- NPD 1001.0A 2011 NASA Strategic Plan
- NPD 2090.6 Authority To Enter Into License Agreements and Implementation of Licensing Authority
- NPD 2091.1B Inventions Made By Government Employees
- NPD 2092.1B Royalties and Other Payments Received by NASA from the Licensing or Assignment of Inventions (REVALIDATED 8/12/2008)
- NPR 2092.1A Distribution of Royalties Received by NASA from the Licensing or Assignment of Inventions (REVALIDATED 8/12/08)
- NPR 2210.1C Release of NASA Software
- NPD 7500.2B NASA Innovative Partnerships Program
- NPR 7500.1 NASA Technology Commercialization Process

Strategic Plan

- Strategic Goal 3.4
  - Facilitate the transfer of NASA technology and engage in partnerships with other government agencies, industry, and international entities to generate U.S. commercial activity and other public benefits.
    - We seek to transfer NASA technologies directly to other government agencies, the national aerospace industry, and the broader U.S. commercial sector.
    - NASA-spurred advances in energy, communication, health, materials science, and other fields generate spinoff applications that benefit the Nation.
    - We have established a core team at each NASA Center charged with technology transfer, licensing, and new partnership development, and we have tasked them to work closely with scientists and engineers to match our technologies with the needs of organizations external to NASA.
    - We actively coordinate with state and local governments and regional economic development organizations to assess the market and develop strategies that will meet the emerging needs of NASA and our partners.
    - We will continue to identify non-traditional strategies and approaches to engaging external partners, such as the use of auctions that highlight NASA patents available for licensing.

License Agreements

- NPD 2090.6; Authority To Enter Into License Agreements and Implementation of Licensing Authority
- It is NASA's policy, consistent with statutory requirements, to promote the transfer and commercial utilization of inventions arising from NASA-supported research or development in which NASA has an ownership interest by the licensing of such inventions.
- The following principles shall be applied to accomplish this policy objective:
  - Pursuant to 35 U.S.C. 207, Federal agencies are authorized to grant exclusive, partially exclusive, or nonexclusive licenses on Federally owned inventions.
  - The term "invention" means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 U.S.C., or any novel variety of plant which is or may be protectable under the Plant Variety Protection Act.
  - No license will be granted to a potential licensee who has not provided NASA with a plan for development and/or marketing of the invention at issue.
  - Preference will be given to a potential licensee who agrees that any products embodying the invention or produced through the use of the invention at issue will be manufactured substantially in the United States.
  - In negotiating terms for any license granted pursuant to this directive, terms should be negotiated that provide the licensee incentive to commercialize the invention.
  - In the case of exclusive or partially exclusive licenses, such terms shall not tend to substantially lessen competition or create or maintain a violation of Federal antitrust laws.

Inventions Made by Government Employees

- NPD 2091.1B; Inventions Made By Government Employees; April 21, 2013
- Consistent with 37 C.F.R. Part 501 and 14 C.F.R. Part 1240, it is NASA's policy to:
  - Protect the Government's interest in, and to provide for, the widest practicable and appropriate dissemination, early utilization, expeditious commercial development, and continued availability of inventions reported to NASA that are made by Government employees.
  - Be fair and impartial in the administration of the rights to such inventions and to afford an employee making an invention the opportunity to retain title to such invention if there is insufficient Government interest or equity for the Government to acquire title.
  - Ensure that each employee making and reporting an invention on which a patent application is filed is considered by the Inventions and Contributions Board (ICB) for an initial monetary award, as well as a supplemental monetary award, based both on the commercial application of the invention and its value in the conduct of aeronautical and/or space activities.

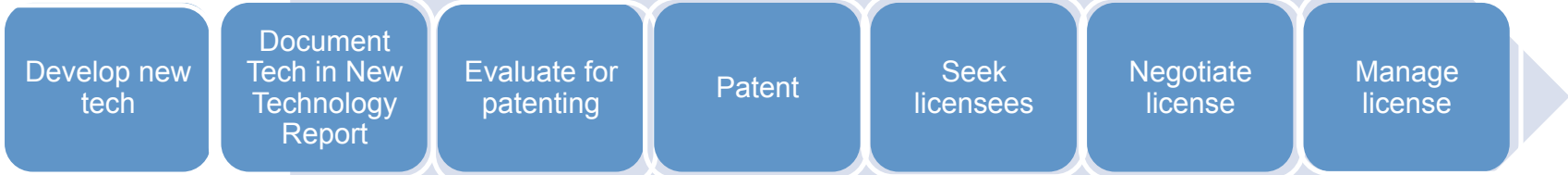
Royalties From Licensing

- NPD 2092.1B; Royalties and Other Payments Received by NASA from the Licensing or Assignment of Inventions; August 12, 2013. It is NASA's policy to—
  - Share with NASA employees making inventions and non-NASA inventors that directly assign their interest in inventions to the Government, a percentage of any royalties and other payments received by NASA from the licensing or assignment of the inventions.
  - The remainder of the royalties or other payments, after payment to the employee or other individual inventors, shall be made available to the NASA Center(s) where the inventions were made, for the following purposes:
    - to pay expenses incidental to the administration and licensing of inventions;
    - to further scientific exchange;
    - to conduct scientific research and development consistent with missions of the Agency;
    - to educate and train employees consistent with the mission of the Agency and for other activities that increase the potential for transfer of Agency technology;
    - or to reward scientific, engineering, and technical employees of the laboratory, including developers of sensitive or classified technology, regardless of whether the technology has commercial applications.
  - Fully utilize the royalties and other payments generated from the licensing of inventions made by a contractor(s) or grantee(s) where the title to such inventions has been assigned to or otherwise vested in NASA (other than by individuals directly assigning their interest in an invention to the Government).

Technology Transfer and Licensing

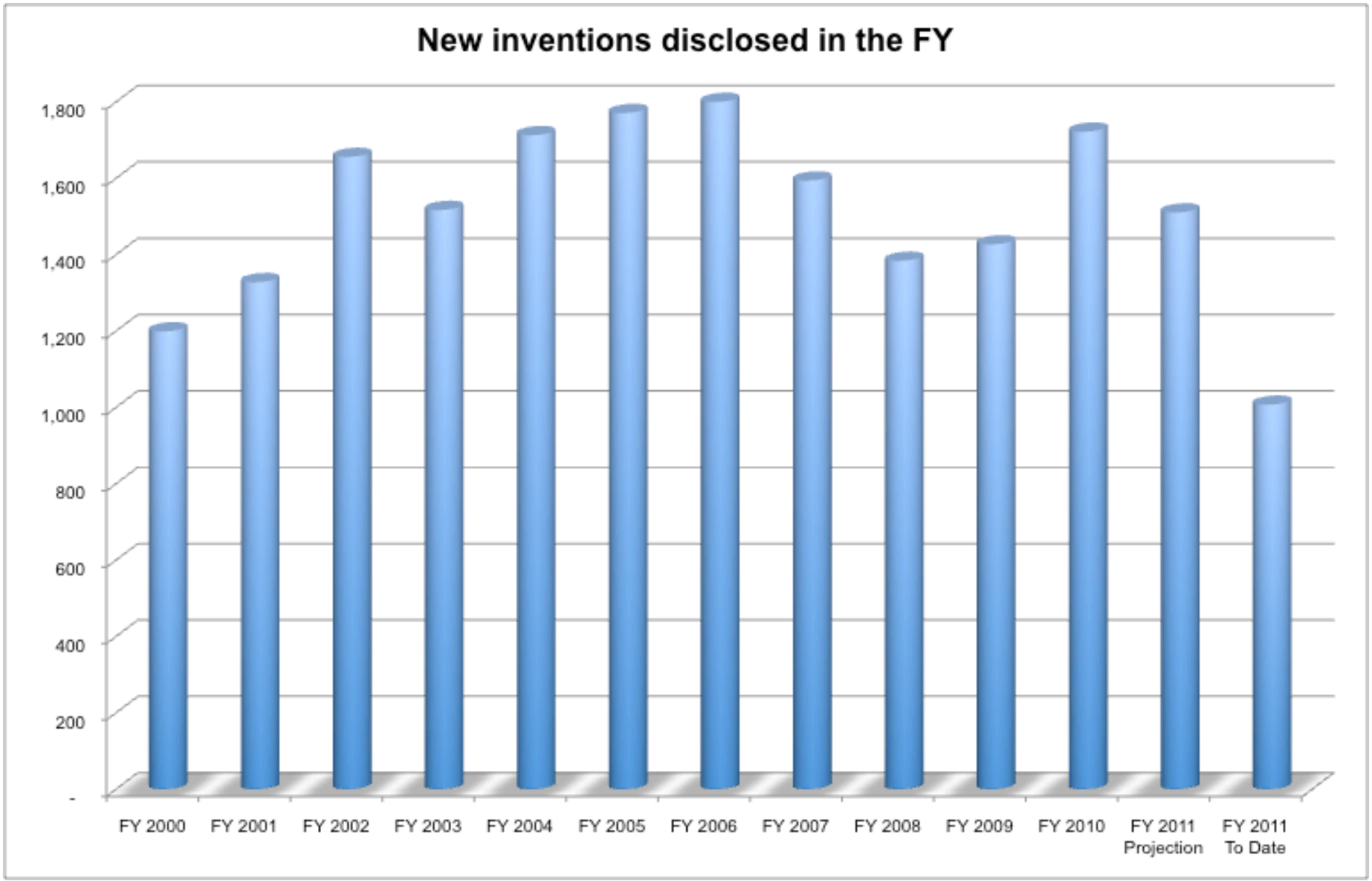
- NPD 7500.2B; NASA Innovative Partnerships Program. The Innovative Partnerships Office shall:
  - Facilitate the transfer of NASA technology, including software, to the private sector as well as to other Government agencies and academia, as required by law, to promote the commercialization and public availability of Federally-owned inventions to benefit the national economy and the U.S. public.
  - Facilitate the protection of the Government's rights in NASA-owned or originated new technologies and inventions, including software.
  - Negotiate licenses in coordination and consultation with Center Patent/Intellectual Property Counsel, or their designee(s), so as to promote the invention's utilization by the public by ensuring the licensee bring the invention to practical application within a reasonable time.
  - Provide commercial assessments of reported new technologies and inventions in which NASA owns a right, title, or interest, to facilitate IP protection and commercialization of new technologies and inventions having commercial potential.
  - In consultation and cooperation with the Agency Counsel for Intellectual Property and the Center Patent or Intellectual Property Counsels, or designee(s), administer the NASA licensing portfolio in accordance with NPD 2090.6.
  - In consultation and cooperation with the Agency Counsel for Intellectual Property and the Center Patent or Intellectual Property Counsels, or designee(s), shall administer the software release program in accordance with NPR 2210.1.

Intellectual Property Management

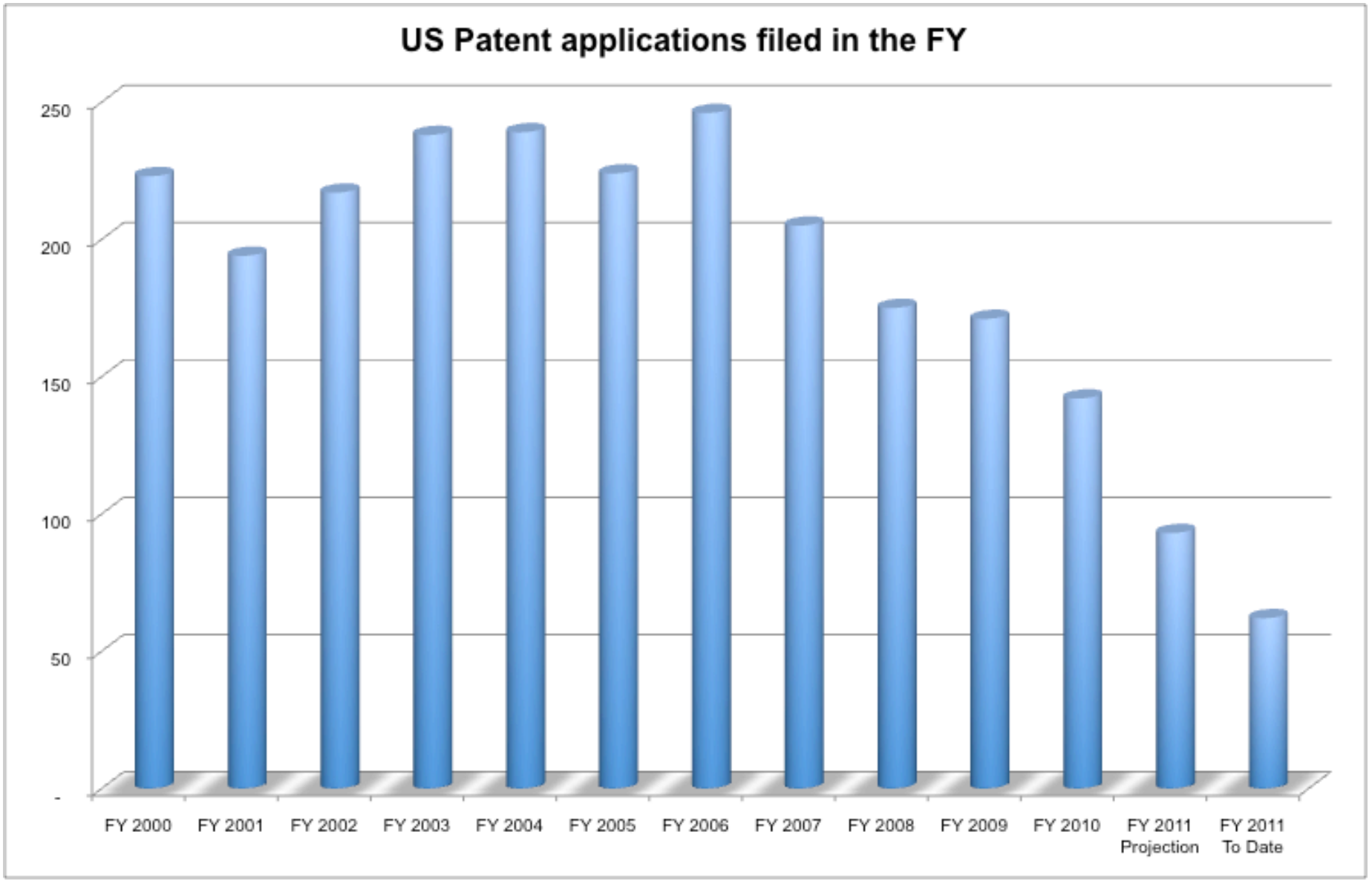


- OCT manages NASA's Intellectual Property via the Innovative Partnerships Office at HQ and at each of the Centers.
- Large inventory of reported inventions and new technologies available for transfer to industry, academia and the public sector.
- Patent application filing (in conjunction with Patent Counsel).
- Seek licensees through marketing of available technologies and identification of potential partners – meetings, publications, online, etc.
- Licensing of patents and copyrights for transfer of technology to private sector (in conjunction with Patent Counsel).
- Collection of royalties by Centers and reinvestment of funds back into research and technology programs.

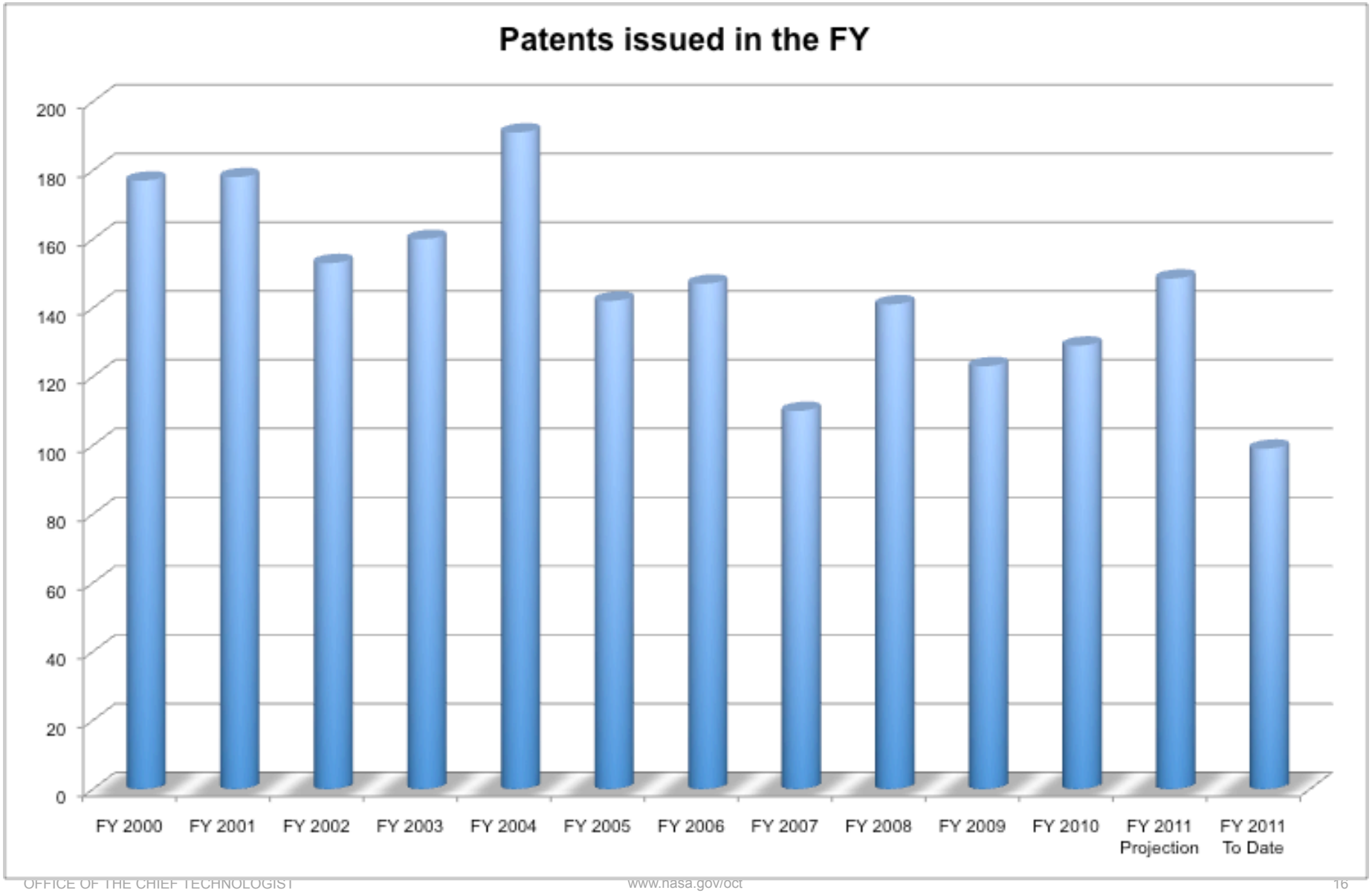
New Technology Reporting



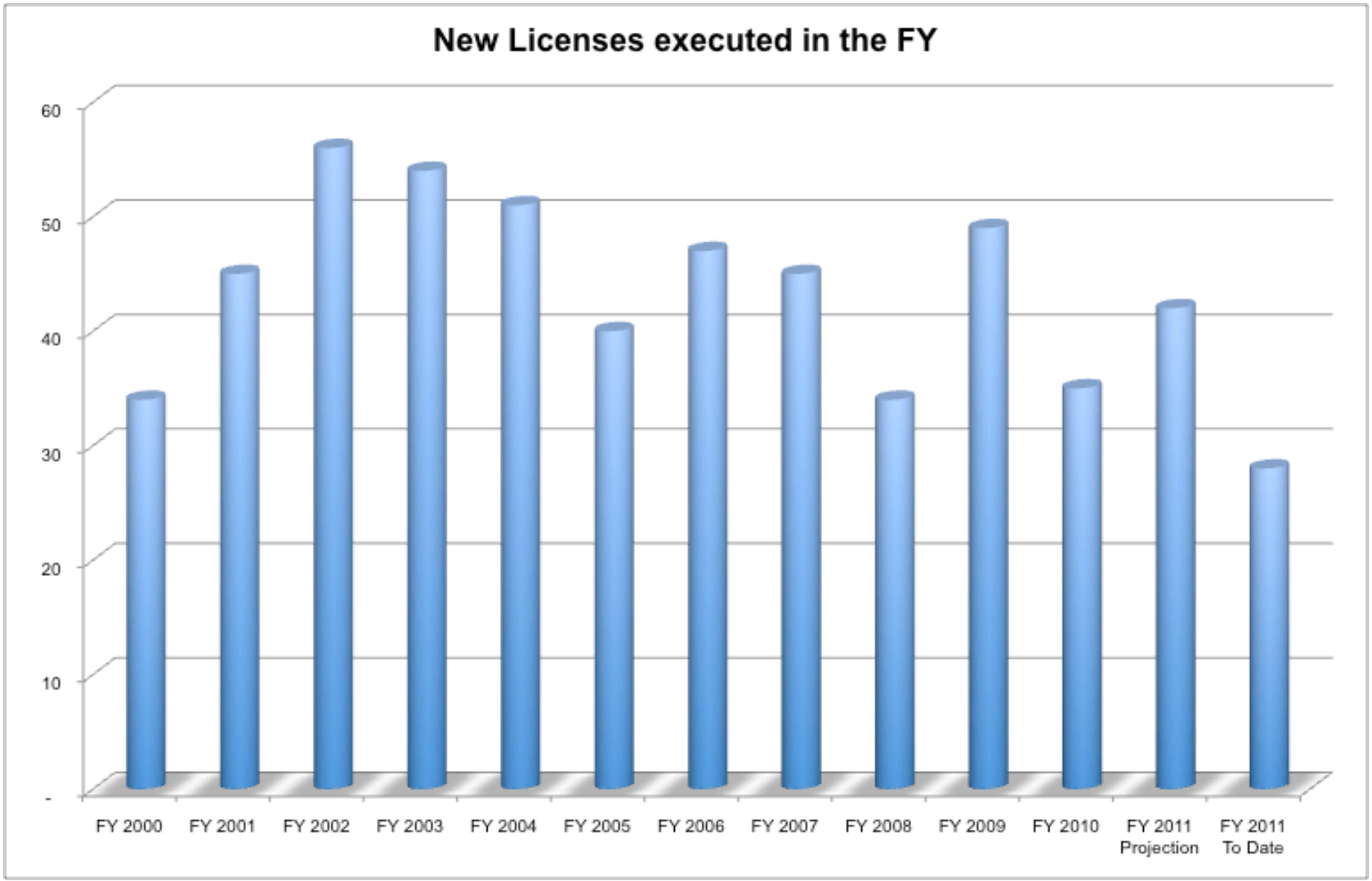
Patent Applications



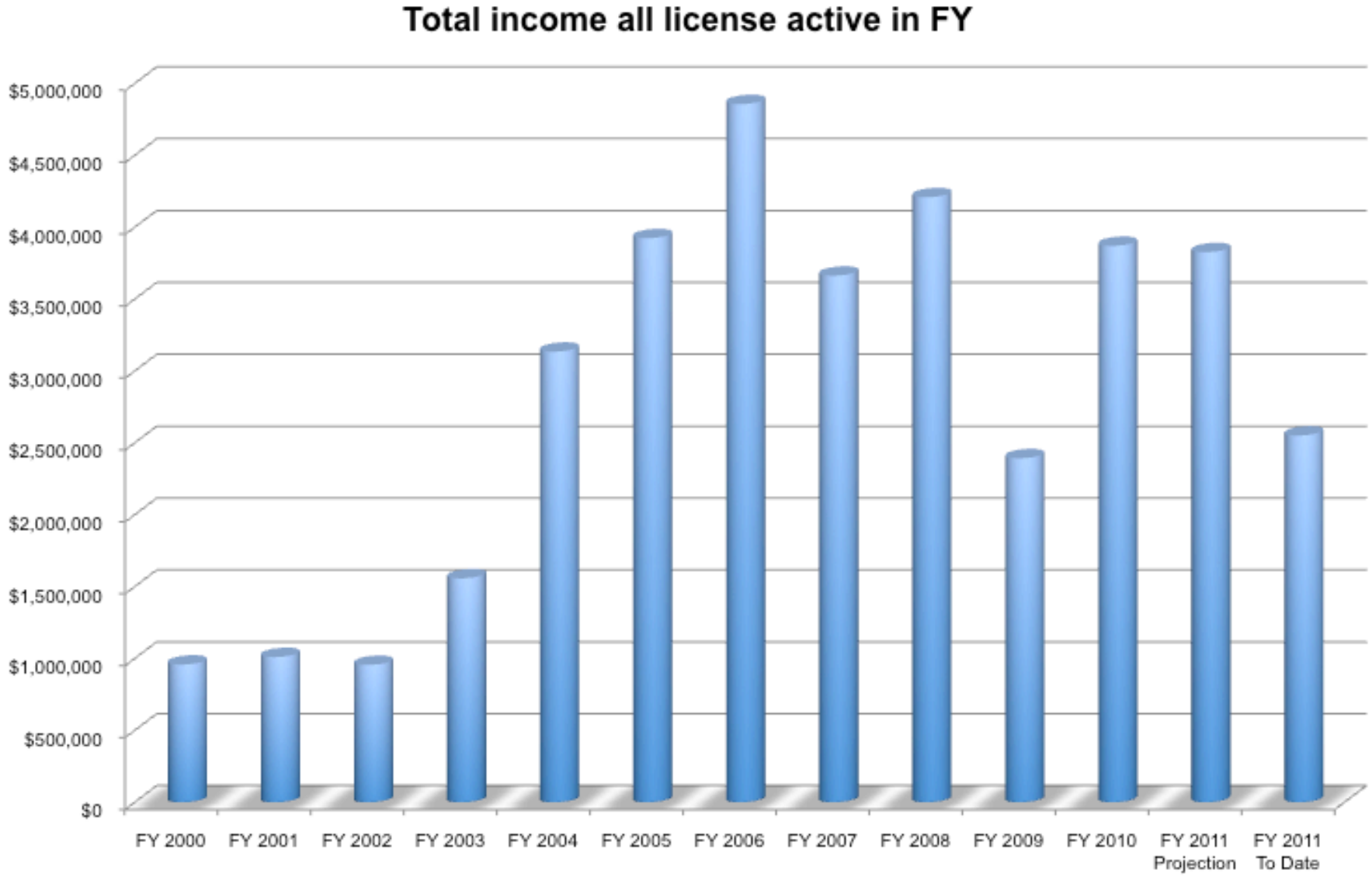
Patents Issued



New Licenses



Licensing and Royalty Income



No-Cost IP Brokerage Services

- On September 7, 2010, NASA issued an RFI for “No-Cost Intellectual Property Marketing and Brokerage Services with Revenue-Sharing Component upon License Execution.”
- NASA sought industry for input on what form these technology transaction services might take, including ideas such as public auctions, Internet-based agreements or other innovative concepts.
  - Partners could be compensated through a percentage of licensing revenues from any transaction they broker.
- This approach will add another tool to existing technology transfer efforts, allowing NASA to effectively move its technology into the marketplace.
  - Goals for the project include promoting transparency of NASA patent license transactions while enhancing development of commercial industry.
  - A primary benefit of partnering for no-cost brokerage services is the potential to make intellectual property licensing processes quicker and easier, saving time and resources for small companies that may have interest in NASA technologies and innovations.
- Responses have been reviewed, an RFP is being prepared and is anticipated to be released early next year.

Additional Opportunities

- Licensing Best Practices.
  - Licensing Best Practices Group has been formed to discuss possible improvement in current practices that would lead to a greater number of licenses of NASA developed technologies.
  - Analysis is underway with recommendations being developed related to:
    - New Technology Report (NTR) process;
    - Outreach and marketing to identify/attract licensees;
    - License application and negotiation processes; and
    - License administration.
- Recent IPO face-to-face meeting between HQ and all Centers identified issues and action plans for eight priority areas including NTR processes and IP Management.
- Lean Six Sigma Kaizen on NASA Intellectual Property Management is planned for September.
  - Includes HQ and all field centers with representatives from OCT/IPO, OGC/IP and procurement.
  - Goals include sharing best practices and building consistency across centers, increasing opportunities for NTRs, streamlining processes, increasing numbers of patents and licenses.